GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA

STARRED QUESTION NO:237
ANSWERED ON:29.03.2012
TECHNOLOGY FOR WEATHER FORECASTING
Dashmunsi Deepa

Will the Minister of EARTH SCIENCES be pleased to state:

(a) the details of the efforts made to forecast real time weather;

(b) whether any technological assistance has been sought from other countries and/ or studies undertaken in this regard;

(c) if so, the details thereof; and

(d) the efforts made by the Government to introduce such technologies in India?

Answer

MINISTRY OF SCIENCE & TECHNOLOGY AND MINISTRY OF EARTH SCIENCES (SHRI VILASRAO DESHMUKH)

a) − d) A statement is laid on the Table of the House

STATEMENT LAID ON THE TABLE OF THE LOK SABHA IN REPLY TO (a) to (d) OF STARRED QUESTION No. 237 REGARDING "TECHNLOGY FOR WEATHER FORECASTING" TO BE ANSWERED ON MARCH 29, 2012

(a) With the commissioning of the state-of-the-art observing, monitoring/early warning and data visualization/information processing and communication technologies under the Phase-I of the Modernization of IMD, several manual operations have been fully automated. All the manpower, that was engaged earlier for such manual operations, have been provided due orientation, training and skill development opportunities not only to attain appropriate operating skills of advanced technological platforms but also contribute efficiently to the quality enhancement through customization of sector specific warning and forecasting services. Methodologies and modeling frameworks that have undergone rigorous performance evaluation in operational R & D environment are implemented after the commissioning of the High Performance Computing (HPC) system for enhancing the weather forecasting capacities through assimilating all available global satellite radiance data for the production of forecast products at 35Km grid globally and 27Kms/9Kms/3Kms/1Km grid over India/regional/mega city domains. Beginning monsoon-2010, for the first time on experimental basis, spatial rainfall forecast outlook (7-day forecasts followed by 7-day outlook) and probabilistic spatial monthly scale rainfall scenarios (indicative above/ below normal activity over various parts of the country) are being generated and hosted on IMD's web-site.

(b) Yes Madam.

(c) With the cooperation from the Meteo France International (MFI), France, a fully automated and digitized weather analysis and forecasting platform along with Improved data visualization, value-addition, dissemination for better public access/ utilization (SYNERGIE); Induction of more objective oriented forecasting system; Improvement in Public Weather Services (PWS) and Early Warning Service Systems have been commissioned.

SYNERGIE is a powerful tool with a user friendly interface for the operational meteorology forecaster that not only provides flexibility to display meteorological data, and to extract desired information as well as feed-in additional professional inputs from the expert forecaster or format documents produced by forecasters. As a functional requirement, the SYNERGIE system has the following capabilities

Ability of the system to ingest all available data

Display tools of current weather, climate and prediction tools for analyzing forecast products from multiple sources

Plotting of Observations on weather charts

Numerical Weather Prediction module

Satellite, Radar, Tropical Cyclone and warning module

PWS system is a set of interfaces and automatic processes that provide flexibility for layout design generate and disseminate products.

(d) The Government feels that the upgradation of the observational, high end computing, communication, forecast/warning dissemination infrastructure should become a continuous process by which the state-of-the-art science and technology tools/ infrastructure can be made accessible to the scientists engaged in weather research and forecasting for enhancing the service quality.